कार्यालय प्राचार्य
बी.सी.एस. शासकीय स्नातकोत्तर महाविद्यालय, धमतरी (छ.ग.)
Website – www.bcspgcdmt.com
E-mail – pgcollege.dhamtari@gmail.com
NAAC GRADE-'B' | AISHE CODE- C-21763
दूरभाष – 07722–238933
फैक्स – 07722–237933

1.2.1 Percentage of programs in which Choice Based Credit System (CBCS)/elective course system has been implemented (10)

Programme Code	Programme name	Year of Introduction
2015-16		
103	B.A.- Part-III (Psychology)	2015-16
603	B.Com- Part-III	2015-16
303	B.Sc.- III (Maths)	2015-16
901	B.Sc. Home Science- I	2015-16
902	B.Sc. Home Science- II	2015-16
903	B.Sc. Home Science- III	2015-16
030	M.Sc. Maths III sem	2015-16
030	M.Sc. Maths IV sem	2015-16
308	M.A. Geography III sem	2015-16
308	M.A. Geography IV sem	2015-16
201	M.A. History I sem	2015-16
201	M.A. History II sem	2015-16
201	M.A. History III sem	2015-16
201	M.A. History IV sem	2015-16
2016-17		
103	B.A.- Part-III (Psychology)	2015-16
603	B.Com- Part-III	2015-16
303	B.Sc.- III (Maths)	2015-16
901	B.Sc. Home Science- I	2015-16
902	B.Sc. Home Science- II	2015-16
903	B.Sc. Home Science- III	2015-16
030	M.Sc. Maths III sem	2015-16
030	M.Sc. Maths IV sem	2015-16
308	M.A. Geography III sem	2015-16
308	M.A. Geography IV sem	2015-16
201	M.A. History I sem	2015-16

201	M.A. History II sem	2015-16
201	M.A. History III sem	2015-16
201	M.A. History IV sem	2015-16
2017-18		
103	B.A.- Part-III (Psychology)	2015-16
603	B.Com- Part-III	2015-16
303	B.Sc.- III (Maths)	2015-16
901	B.Sc. Home Science- I	2015-16
902	B.Sc. Home Science- II	2015-16
903	B.Sc. Home Science- III	2015-16
030	M.Sc. Maths III sem	2015-16
030	M.Sc. Maths IV sem	2015-16
308	M.A. Geography III sem	2015-16
308	M.A. Geography IV sem	2015-16
201	M.A. History I sem	2015-16
201	M.A. History II sem	2015-16
201	M.A. History III sem	2015-16
201	M.A. History IV sem	2015-16
2018-19		
103	B.A.- Part-III (Psychology)	2015-16
603	B.Com- Part-III	2015-16
303	B.Sc.- III (Maths)	2015-16
901	B.Sc. Home Science- I	2015-16
902	B.Sc. Home Science- II	2015-16
903	B.Sc. Home Science- III	2015-16
030	M.Sc. Maths III sem	2015-16
030	M.Sc. Maths IV sem	2015-16
308	M.A. Geography III sem	2015-16
308	M.A. Geography IV sem	2015-16
201	M.A. History I sem	2015-16
201	M.A. History II sem	2015-16
201	M.A. History III sem	2015-16
201	M.A. History IV sem	2015-16
2019-20		
103	B.A.- Part-III (Psychology)	2015-16
603	B.Com- Part-III	2015-16
303	B.Sc.- III (Maths)	2015-16

901	B.Sc. Home Science- I	2015-16
902	B.Sc. Home Science- II	2015-16
903	B.Sc. Home Science- III	2015-16
030	M.Sc. Maths III sem	2015-16
030	M.Sc. Maths IV sem	2015-16
308	M.A. Geography III sem	2015-16
308	M.A. Geography IV sem	2015-16
201	M.A. History I sem	2015-16
201	M.A. History II sem	2015-16
201	M.A. History III sem	2015-16
201	M.A. History IV sem	2015-16
402	M.Sc. Zoology IV sem	2019-20
	M.Sc. IT III sem	2019-20
301	M.Sc. Physics III sem	2019-20
301	M.Sc. Physics IV sem	2019-20

(डॉ.श्रीदेवी चौबे)
प्रभारी प्राचार्य
बी.सी.एस.शासकीय स्नातकोत्तर महाविद्यालय
जिला-धमतरी (छ.ग.)

B.Sc. (Home-Science) PART- I

MARKING SCHEME

S.No.	Paper No.	Subject	Theory M. Mark	Practical M. Mark	Total	Theory M. Mark	Practical M.Mark
Group I	(A)	Environmental Studies	75	-	100	33	
	(B)	Field work	25				
		Foundation Course					
	(A)	Hindi Language-I	75		75	26	
	(B)	English Language-II	75		75	26	
Group II	(A)	Basic Nutrition	50	25	75	33	09
	(B)	Introduction to Resource Management	50	25	75		09
Group III	(A)	Introduction to Human Development	50	25	75	33	09
	(B)	Textile and Clothing	50	25	75		09
Group IV	(A)	Community Development	50	25	75	33	09
	(B)	Personal Empowerment and Computer Basics	50	25	75		09
		Total	**700**				

DISTRIBUTION OF MARKS IN VARIOUS PRACTICALS

S.No.	Name of the Practical	Total M.	Sessional	Viva	Practical	Marks
1	BASIC NUTRITION	25	05	05	A. Preparation &Presentation) any one Recipe	10
					B. Taste	05
2	INTRODUCTION TO RESOURCE MENAGEMENT	25	05	05	-	15
3	INTRODUCTION TO HUMAN DEVELOPMENT	25	05	-	A. Preparation of any one article of Baby kit	10
					B. Toy or wearing Food of Imm. Chart	10
4	TEXTILE & CLOTHING	25	05		A. Drafting	05
					B. Stitching	10
					C. Weave	05
5	COMMUNITYDEVELOPMENT	25	10	05	Preparation of Audio-Visual aids	10
6	PERSONAL EMPOWERMENT & COMPUTER BASIC	25	05	05	Computer Practical	15

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B.Sc. (Home Science) PART- II
MARKING SCHEME

S.No.	Paper No.	Subject	Theory M. Mark	Practical M. Mark	Total	Theory M. Mark	Practical M.Mark
Group I	(A) (B)	**Foundation Course** Hindi Language-I English Language-II	 75 75		 75 75	 26 26	
Group II	(A) (B)	Clinical Nutrition & Dietetics Textiles and Fiber Science	50 50	25 25	75 75	33	09 09
Group III	(A) (B)	Human Physiology & Community Nutrition Communication Process	50 50	25 25	75 75	33	09 09
Group IV	(A) (B)	Life Span Development Consumer Economics	50 50	25 25	75 75	33	09 09

DISTRIBUTION OF MARKS IN VARIOUS PRACTICALS

No.	Name of the Practical	Total Marks	Distribution			Marks
			Session	Viva	Practical	
Group – II A	Clinical Nutrition & Dietetics	**25**	**05**	**05**	Planning Cooking + Presentation	**08** **07**
Group – II B	Textiles and Fiber Science	**25**	**05**	**05**	Stain Removal Tie & Dye Printing	**05** **05** **05**
Group – III A	Human Physiology &Community Nutrition	**25**	**05**	**05**	Spotting Blood Practicals	**10** **05**
Group – III B	Communication Process	**25**	**05**	**05**	Preparation of Audio Visual Aids - 2	**15**
Group – IV A	Life Span Development	**25**	**05**	**05**	Practical	**15**
Group – IV B	Consumer Economics	**25**	**05**	**05**	Practical	**15**

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B.Sc. (HOME-SCIENCE) PART III
MARKING SCHEME

Group No.	Paper No.	Subject	Theory M. Mark	Practical M. Mark	Theory M. Mark	Practical M. Mark
I		**Foundation Course**				
	(A)	Hindi Language	75		26	
	(B)	English Language	75		26	
II	(A)	Nutritional Biochemistry	50	25	33	09
	(B)	Food Preservation	50	25		09
III	(A)	Early Childhood Education	50	25	33	09
	(B)	Extension Education	50	25		09
IV	(A)	Foundation of Art and Design	50	25	33	09
	(B)	Apparel Making & Fashion Designing	50	25		09

DISTRIBUTION OF MARKS IN VARIOUS PRACTICAL

S.No.	Name of the Practical	Total Mark	Distribution			
			Sessi.	Viva		Marks
1	Nutritional Biochemistry	25	5	5	Titration, Identification of CHO, Blood	10 05
2	Food Preservation	25	5	5	Preparation Presentation	10 05
3	Early Childhood Education	25	5	5	Preparation Teaching	05 10
4	Extension Education	25	5	5	Practical – (2)	15
5	Foundation of Art & Design	25	5	5	Practical – (2)	15
6	Apparel Making	25	5	-	Stitching or Designing	10

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विषय / संकाय / प्रश्नपत्र का नामः **B.Sc. Part-III (Mathematics)**

Paper-III (Optional Papers)

वर्तमान पाठ्यक्रम	नवीन संशोधित पाठ्यक्रम	नवीन संशोधित पाठ्यक्रम का औचित्य
(I) PRINCIPLES OF COMPUTER SCIENCE (II) DISCRETE MATHEMATICS (III) APPLICATION OF MATHEMATICS IN FINANCE AND INSURANCE (IV) PROGRAMMING IN C AND NUMERICAL ANALYSIS (V) MATHEMATICAL MODELLING	(I) PRINCIPLES OF COMPUTER SCIENCE (II) DISCRETE MATHEMATICS ~~APPLICATION OF MATHEMATICS IN FINANCE AND INSURANCE~~ (III) PROGRAMMING IN C AND NUMERICAL ANALYSIS ~~MATHEMATICAL MODELLING~~	पूर्व में प्रचलित 5 वैकल्पिक प्रश्नपत्रों में से दो को अलोकप्रिय होने के कारण विलोपित किया गया है। विगत 10 वर्षो में किसी भी छात्र / छात्रा द्वारा उक्त प्रश्नपत्रों का चयन नहीं किया गया है।
प्रश्नपत्र का पाठ्यक्रम यथावत है।		

Prof.H.K.Pathak **Prof.B.S.Thakur** **Prof.M.A.Siddiqui** **Dr.S.K.Bhatt** **Dr.R.K.Mishra** **Dr.A.K.Mishra** **S.K.Gupta** **Sangeeta Pandey**

B.COM. PART-III

SCHEME OF EXAMINATION

Subject	Max. Marks	Min. Marks
A. FOUNDATION COURSE-		
(a) HIndi Language -	75	26
(b) English Language -	75	26
B. COMPULSORY CORE COURSE :		
i Income Tax	75	25
ii Indirect Tax	75	25
iii Management Accounting	75	25
iv Auditing	75	25
And any one of the following Cantination Optional Group.		
OPTIONAL GROUP - A		
i Financial Management	75	25
ii Financial Market	75	25
OPTIONAL GROUP - B		
i Principal of Marketing	75	25
ii International Marketing	75	25
OPTIONAL GROUP - C		
i Information Technology and its Applications in Business	75	25
ii Essential of E-Commerce	75	25
OPTIONAL GROUP - D		
i Fundamentals of Insurance	75	25
iii Money & Banking System	75	25

USE OF CALCULATORS

The students of Degree/P.G. Classes will be permitted to use of Calculators in the examination hall from annual 1986 examination on the following conditions as per decision of the standing committee of the Academic Council at its meeting held on 31-1-1986.

1. Student will bring their own Calculators.
2. Calculators will not be provided by University or examination centres.
3. Calculators with, memory and following variables be permitted +, −, ×, ÷, square reciprocal, expotentials, log squares, root, trignometric functions viz, sine, cosine tangent etc. factorial summation, xy, yx and in the light of objective approvial of merits and demerits of the viva only will be allowed.

पं. रविशंकर शुक्ल विश्वविद्यालय
रायपुर (छत्तीसगढ़)

पाठ्यक्रम

बी.ए.-3 (कोड-103) B. A.-3 (Code-103)

बी.ए. क्लासिक्स-3 (कोड-053) B.A. CLASSICS-3 (Code-053)

परीक्षा : 2015

कुलसचिव पं. रविशंकर शुक्ल विश्वविद्यालय
रायपुर (छत्तीसगढ़) की ओर से

अधिकृत मुद्रक एवं प्रकाशक :
गीता पब्लिकेशन
महामाईपारा, रायपुर (छत्तीसगढ़)

PSYCHOLOGY

PAPER - I

PSYCHOLOGICAL STATISTICS

M.M.:50

(Paper Code-0250)

UNIT-I Statistics : Meaning and application in Psychology, nature of score, categorical and continuous variables, frequency distribution, Graphic representation of data.

UNIT-II Measures of Central Tendency : Mean, Median and mode of group and un group data, Measures of variability : Range, S.D., Q.D., A.D., applications of measures of central tendency and variability.

UNIT-III Nature and characteristics of normal probability curve : concept of skewness and Kurtosis, Correlation : Concept, Types and methods - rank difference and product moment (in ungrouped data), Biserial and Tetrachoric coefficient.

UNIT-IV Inferential statistics : Concept of null Hypothesis, level of significance, type I error & type II error, T-test (uncorrelated data)

UNIT-V Distribution free statistics : Chi-square, Median and sign test, applications of computer in psychological statistics.

REFERENCES :

1. Siegel S., (1994) Non parametric statistics New York : Mcgraw Hill

   Garret : Statistics in Psychology and Education Times of India Publisher.

2. कपिल एस. के. - सांख्यिकी के मूल तत्व

   गैरेट - मनोविज्ञान एवं शिक्षा में, सांख्यिकी

PAPER - II (Optional)

(A) HUMAN DEVELOPMENT

M.M.:50

(Paper Code-0251)

Candidate has to opt. any one of the following Optional papers.

UNIT-I Concept of Human Development, Theories of Human Development : Psychoanali-tical and Maslow, Determinants of Human Development - Biological, social, cultural factors, Approaches to study human developments : Longitudinal and cross - sectional.

UNIT-II Socialisation : Role of family, peers and school, Media and socialisation, Ecological factors in Human Development, Cognitive Development : Theoritical Perspectives Piaget, Information Processing, Vyogotsky.

UNIT-III Self and Identity : Emergence of self, Development of personal identity, identity crises, Physical and sexuel maturation, Sequential development of emotions.

UNIT-IV Development of morality and self concept, Development of gender differences and gender roles. Role of marriage, family and occupation in Human Development.

UNIT-V Problems of Aging - Cognitive, conative, affective, Developmental Disabi-lities.

BOOK RECOMMENDED :

1. Berk L.E. (1989) Child Development. Boston : Allyn and Bacon

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2. Santrock J.W. (1999) Lifespan development. New York McGraw Hill.
3. E.B. Hurlock (1997) Development Psychology : A life span approach. V, edition.
4. शाह गोवर्धन - विकासात्मक मनोविज्ञान

PAPER - II (Optional)

(B) ENVIRONMENTAL PSYCHOLOGY

M.M.:50

(Paper Code-0252)

UNIT-I Evaluing environmental ethics from values about nature in the ancient India systems. Earth as a living system, Psychological approaches to environment : Eco cultural Psychology (Berry), Bio-social Psychology (Dawson), Ecological Psychology (Berkar) Person Environment Transactions (sokols, Itlelson)

UNIT-II Effects of environment on behaviour : Noise pollution chemical Pollution, crowding and personal space. Effect of behaviour on environment : Perception, Preferences and awareness of environment.

UNIT-III Human Nature and environmental problems : Pro-social and pro environment behaviours, Eco-systems and their components Demography : Mortality and fertility, Resource Use : Common Property resources, Sustainable Development, Ecology : Acculturation and Psychological adaptation.

UNIT-IV Methods : Naturalistic observetion and field surveys. Environmental Assessment : Naturalistic observation and field surveys Socio - Psychological dimensions of environments impact Environmental deprivation : Nature and consequences, Creating environmental awareness - Social Movements : Chipko, Tehri Narmad.

UNIT-V Application of Psychology in man environment fit : Education - Classroom environment, Industry - Industrial / Organisational effectiveness, Health - Physical, mental and spiritual, Social - Communal harmony and National integration.

REFERENCES :

1. Goldsmith E. (1991) - The way : The ecological world vic Boston : Shambhala.
2. Jain U (1987) The Psychological consequences of crowding New Delhi : Sage.
3. Mishra R.C. Sinha D & Berry, J.W. (1996) Ecology, Community and life style, New Delhi.

PSYCHOLOGY PRACTICALS

M.M.:50

This paper carries 50 marks. It comprises of two parts. Part A comprises of psychological experiments and testing while part B comprises of complition of Project Report.

PART - A

Note : From the following experiment any 5 are to be done-

1. Bilateral transfer of training.
2. Measurement of Illusion.
3. Habit interference.
4. Effect of need priority on selection of Advertising material.

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5. Effect of mental fatigue upon performance.
6. Reaction Time
7. Effect of frustration on learning.
8. Depth Perception.

Note : From the following tests any 4 are to be done-

1. Level of aspiration
2. Need for guidence
3. Maturity scale
4. Attitude Scale.
5. Classroom environment scale.
6. Mental health
7. Family environment test
8. Test of Moral values.

PART - B

The condidate will be alloted a topic of project by the departmental committee. He/she is required to carry out a small scale project based on small sample. He/she is required to complet the project and submit its report. 15-20 pages, covering all major steps of scientific enquiry under the supervision of the departmental teacher. This will be the part of practical work. The soggested areas for the project work are as under Mental health, sibling rivarly, deprivation, identity crises, drug abuse aging media effect, woman employment, Job sotisfaction, stress, stren management, problems of adolscent etc.

DISTRIBUTION OF MARKS

Conduction of Experiment	-	10 marks
Administration of test	-	10 marks
Evaluation of Project Report and Practical record	-	10 marks
Viva - Voce	-	10 marks

Note : Candidate is required to attend practical work regularly. His/Her attendence should not be less than 75%. If his / her practical work performance is not satisfactory, he / she shall be debarred from the examinations.

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पाठ्यक्रम

बी.एस.सी. भाग-3 (कोड-303)

B. Sc. Part - III (Code - 303)

परीक्षा : 2015

कुलसचिव पं. रविशंकर शुक्ल विश्वविद्यालय
रायपुर (छत्तीसगढ़) की ओर से

6. K. Hoffman and R. Kunze,Linear Algebra, 2"" Editon, Prentice Hall. Englewood Cliffs, New Jersey, 1971.
7. S.K. Jain, A. Gunawardena & P.B. Bhattacharya, Basic Linear Algebra with MATLAB. Key College Publishing (Springer-Verlag) 2001.
8. S. Kumaresan, Linear Algebra, A.Geometric Approach, Prentice-Hall of India, 2000.
9. Vivek Sahai and Vikas Bist, Algebra, Norosa Publishing House, 1997.
10. I.S. Luther and I.B.S.Passi, Algebra, Vol. I-Groups, Vol. II-Rings. Narosa Publishing House (Vol. I-1996, Vol. II-1999)
11. D.S. Malik, J.N. Mordeson, and M.K. Sen, Fundamentals of Abstract Algebra, McGraw-Hill International Edition, 1997.

PAPER - III - (OPTIONAL)

(I) PRINCIPLES OF COMPUTER SCIENCE (Paper Code-0900)

UNIT-I **Data Storage** - Storage of bits. Main Memory. Mass Storage. Coding Information of Storage. The Binary System. Storing integers, storing fractions, communication errors.

Data Manipulation - The Central Processing Unit. The Stored-Program Concept. Programme Execution. Other Architectures. Arithmetic/Logic Instructions. Computer-Peripheral Communication.

UNIT-II **Operating System and Networks** - The Evolutionof Operating System. Operating System Architecture. Coordinating the Machine's Activities. Handling Competition Among Process. Networks. Networks Protocol.

Software Engineering - The Software Engineering Discipline. The Software Life Cycle. Modularity. Development Tools and Techniques. Documentation. Software Ownership and Liability.

UNIT-III **Algorithms** - The Concept of an Algorithm, Algorithm Representation. Algorithm Discovery. Iterative Structures. Recursive Structures. Efficiency and Correctness. (Algorithms to be implemented in C^{++}).

Programming Languages - Historical Perspective. Traditional Programming Concepts, Program Units. Language Implementation. Parallel Computing. Declarative Computing.

UNIT-IV **Data Structures** - Arrays. Lists. Stacks. Queues. Trees. Customised Data Types. Object Oriented Programming.

File Structure - Sequential Files. Text Files. Indexed Files. Hashed Files. The Role of The Operating System.

Database Structure - General Issues. The Layered Approach to Database Implementation. The Relational Model. Object-Oriented Database. Maintaining Database Integrity. E-R models.

UNIT-V **Artifical Intelligence** - Some Philosophical Issues. Image Analysis. Reasoning, Control System Activities. Using Heuristics. Artificial Neural Networks. Application of Artificial Intelligence.

Theory of Computation - Turning Machines. Computable functions. A Non computable Function. Complexity and its Measures. Problem Classification.

REFERENCES :

1. J. Glen Brookshear, Computer Science : An Overview, Addition -Wesley.
2. Stanley B. Lippman, Josee Lojoie, C^{++} Primer (3rd Edition), Addison-Wesley.

PAPER - III - (OPTIONAL)

(II) DISCRETE MATHEMATICS (Paper Code-0901)

UNIT-I **Sets and Propositions** - Cardinality. Mathematical Induction, Principle of Inclusion and exclusion.

Computability and Formal Languages - Ordered Sets. Languages. Phrase Structure Grammars. Types of Grammars and Languages. Permutations. Combinations and Discrete Probability.

UNIT-II **Relations and Functions** - Binary Relations, Equivalence Relations and Partitions. Partial Order Relations and Lattices. Chains and Antichains. Pigeon Hole Principle.

Graphs and Planar Graphs - Basic Terminology. Multigraphs. Weighted Graphs. Paths and Circuits. Shortest Paths. Eulerian Paths and Circuits. Travelling Salesman Problem. Planner Graphs.

TREES.

UNIT-III **Finite State Machines** - Equivalent Machines. Finite State Machines as Language Recognizers. Analysis of Algorithms - Time Complexity. Complexity of Problems. Discrete Numeric Functions and Generating Functions.

UNIT-IV1 **Recurrence Relations and Recursive Algorithms** - Linear Recurrence Relations with Constant Coefficients. Homogeneous Solutions. Particular Solution. Total Solution. Solution by the Method of Generating Functions. Brief review of Groups and Rings.

UNIT-V **Boolean Algebras** - Lattices and Algebraic Structures. Duality, Distributive and Complemented Lattices. Boolean Lattices and Boolean Algebras. Boolean Functions and Expressions. Prepositional Calculus. Design and Implementation of Digital Networks. Switching Circuits.

REFERENCES :

C.L. Liu, Elements of Discrete Mathematics, (Second Edition), McGraw Hill, International Edition, Computer Science Series, 1986.

PAPER - III - (OPTIONAL)

(III) APPLICATION OF MATHEMATICS IN FINANCE AND INSURANCE (Paper Code-0902)

Application of Mathematics in Finance :

UNIT-I **Financial Management** - An overview. Nature and Scope of Financial Management. Goals of Financial Management and main decisions of financial management. Difference between risk, speculation and gambling.

Time value of Money-Interest rate and discount rate. Present value and future valuediscrete case as well as continuous compounding case. Annuities and its kinds.

UNIT-II Meaning of return. Return as Internal Rate of Return (IRR). Numerical Methods like Newton RaphsonMethod to calculate IRR. Measurement of returns under uncertainty situations. Meaning of risk. Difference between risk and uncertainty. Types of risks. Measurement of risk. Calculation of security and Portfolio Risk and Return-Markowitz Model. Sharpe's Single Index Model Systematic Risk and Unsystematic Risk.

UNIT-III Taylor series and Bond Valuation. Calculation of Duration and Convexity of bonds. Financial Derivaties - Futures. Forward. Swaps and Options. Call and Put Option. Call and Put Parity Theorem. Pricing of contingent claims through Arbitrage and Arbitrage Theorem.

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Application of Mathematics in Insurance

UNIT-IV Insurance Fundamentals - Insurance defined. Meaning of loss. Chances of loss, peril, hazard, and proximate cause in insurance. Costs and benefits of insurance to the society and branches of insurance-life insurance and various types of general insurance. Insurable loss exposuresfeature of a loss that is ideal for insurance. Life Insurance Mathematics - Construction of Mortality Tables. Computation of Premium of Life Insurance for a fixed duration and for the whole life.

UNIT-V Determination of claims for General Insurance - Using Poisson Distribution and Negative Binomial Distribution-the Polya Case.
Determination of the amount of Claims in General Insurance - Compound Aggregate claim model and its properties, and claims of reinsurance. Calculation of a compound claim density function. F-recursive and approximate formulae for F.

REFERENCES :

1. Aswath Damodaran, Corporate Finance - Theory and Practice, John Wiley & Sons Inc.
2. John C. Hull, Options, Futures, and Other Derivatives, Prentice-Hall of Indian Private Limited.
3. Sheldon M. Ross, An Introduction to Mathematical Finance, Cambridge University Press.
4. Mark S. Dorfman, Introduction to Risk Management and Insurance, Prentice Hall, Englwood Cliffs, New Jersey.
5. C.D. Daykin, T. Pentikainen and M. Pesonen, Practical Risk Theoryfor Actuaries, Chapman & Hall.

PAPER - III - (OPTIONAL)

Theory component will have maximum marks 30.
Practical component will have maximum marks 20.

(IV) PROGRAMMING IN C AND NUMERICAL ANALYSIS (Thoury & Practical)

(Paper Code-0903)

UNIT-I Programmer's model of a computer. Algorithms. Flow Charts. Data Types. Arithmetic and input/output instructions. Decisions control structures. Decision statements. Logical and Conditional operators. Loop. Case control structures. Functions. Recursions. Preprocessors. Arrays. Puppetting of strings. Structures. Pointers. File formatting.

Numerical Analysis

UNIT-II Solution of Equations : Bisection, Secant, Regula Falsi, Newton's Method, Roots of Polynomials : Interpolation : Lagrange and Hermite Interpolation, Divided Differences, Difference Schemes, Interpolation Formulasusing Differences. Numerical Differentiation. Numerical Quadrature : Newton-Cote's Formulas. Gauss Quadrature Formulas, Chebychev's Formulas.

UNIT-III Linear Equations : Direct Methods for Solving. Systems of Linear Equations (Guass Elimination, LU Decomposition, Cholesky Decomposition), Iterative Methods (Jacobi, GaussSeidel, Relaxation Methods).
The Algebraic Eigenvalue problem : Jacobi's Method, Givens' Method, Householder's Method, Power Method, QR Method, Lanezos' Method.

UNIT-IV Ordinary Differential Equations : Euler Method, Single-step Methods, Runge-Kutta's Method, Multi-step Methods, Milne-Simpson Method, Methods Based on Numerical

Integration, Methods Based on Numerical Differentiation, Boundary Value Problems, Eigenvalue Problems.

Approximation : Different Types of Approximation, Least Square Polynomial Approximation, Polynomial Approximation using Orthogonal Polynomials, Approximation with Trigonometric Functions, Exponential Functions, Chebychev Polynomials, Rational Functions.

Unit-V Monte Carlo Methods Random number generation, congruential generators, statistical tests of pseudo-random numbers.

Random variate generation, inverse tranform method, composition method, acceptancerejection method, generation of exponential, normal variates, binomial and Poisson variates.

Monte Carlo integration, hit or miss Monte Carlo integration, Monte Carlo integration for improper integrals, error analysis for Monte Carlo intergration.

REFERENCES :

1. Henry Mullish& Herbert L. Cooper, Spirit of C : An Introductionto Modern Programming, Jaico Publishers, Bombay.
2. B.W. Kernighan and D.M. Ritchie. The C Programming Language 2"d Edition, (ANSI features) Prentice Hall, 1989.
3. Peter A Darnel and Philip E. Margolis, C : A Software Engineering Approach, Narosa Publishing House, 1993.
4. Robert C. Hutehisonand Steven B. Just, Programming using C Language, McGraw Hill, 1988.
5. Les Hancock and Morris Krieger, The C Primer, McGraw Hill, 1988.
6. V. Rajaraman, Programming in C, Prentice Hall of India, 1994.
7. Byron S. Gottfried, Theory and Problems of Programming with C, tata McGraw-Hill Publishing Co. Ltd., 1998.
8. C.E. Froberg, Introduction to Numerical Analysis, (Second Edition), Addison-Wesley, 1979.
9. James B. Scarborough, Numerical Mathematical Anasysis, Oxford and IBHPublishing Co. Pvt. Ltd. 1966.
10. Melvin J. Maron, Numerical Analysis A Practical Approach, Macmillan publishing Co., Inc. New York, 1982.
11. M.K. Jain, 'S.R.K. lyengar, R.K. Jain, Numerical Methods Problems and Solutions, New Age International (P) Ltd., 1996.
12. M.K. Jain, S.R.K. lyengar, R.K. Jain, Numerical Methods for Scientific and Engineering Computation, New Age International (P) Ltd., 1999.
13. R.Y. Rubistein, Simulation and the Monte Carlo Methods, John Wiley, 1981.
14. D.J. Yakowitz Computational Probability and Simulation, Addison-Wesley, 1977.

PAPER - III - (OPTIONAL)

(IV) PRACTICAL

PROGRAMMING IN C AND NUMERICAL ANALYSIS

LIST OF PRACTICAL TO BE CONDUCTED...

1. Write a program in C to find out the largest number of three integer numbers.
2. Write a program in C to accept monthly salary from the user, find and display income tax with the help of following rules :

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Monthly Salary	Income Tax
9000 or more	40% of monthly salary
7500 or more	30% of monthly salary
7499 or less	20% of monthly salary

3. Write a program in C that reads a year and determine whether it is a leap year or not.
4. Write a program in C to calculate and print the first n terms of fibonacci series using looping statement.
5. Write a program in C that reads in a number and single digit. It determines whether the first number contains the digit or not.
6. Write a program in C to computes the roots of a quadratic equation using case statement.
7. Write a program in C to find out the largest number of four numbers using function.
8. Write a program in C to find the sum of all the digits of a given number using recursion.
9. Write a program in C to calculate the factorial of a given number using recursion.
10. Write a program in C to calculate and print the multiplication of given 2D matrices.
11. Write a program in C to check that whether given string palindrome or not.
12. Write a C function seriessum () to calculate the sum of series :
    $1+X+1/2!\ X^2+1/3!\ X^3+\ldots\ldots 1/n!\ X^n$
13. Write a program in C to determine the grade of all students in the class using Structure. Where structure having following members - name, age, roll, sub 1, sub2, sub3, sub4 and total.
14. Write a program in C to copy one string to another using pointers. (Without using standard library functions).
15. Write a program in C to store the data of five students permanently in a data file using file handling.

PAPER - III - (OPTIONAL)

(V) MATHEMATICAL MODELLING (Paper Code-0904)

The Process of Applied mathematics.

UNIT-I Setting up first-order differential equations - Qualitative solution sketching. Difference and differential equation growth models.

UNIT-II Single-species population models. Population growth-An age structure model. The spread of Technological innovation.

UNIT-III Higher-order linear models- A model for the detection of diabetes. Combat modes. Traffic models - Car-following models. Equilibrium speed distributions.

UNIT-IV Nonlinear population growth models. Prey-Predator models. Epidemic growth models. Models from political science - Proportional representation-cumulative voting, comparison voting.

UNIT-V Applications in Ecological and Environmental subject areas- Urban waste water management planning.

REFERENCES :

1. Differential equation models, Eds. Martin Braun, C.S. Coleman, D.A. Drew.
2. Political and Related Models, Steven. J. Brams, W.F. Lucas, P.D. Straftin (Eds.)
3. Discrete and System models, W.F. Lucas, F.S. Roberts, R.M. Thrall.
4. Life Science Models, H.M. Roberts & M. Thompson.

All volumes published as modules in applied Mathematics, Springer-Verlag, 1982.

5. Mathematical Modelling by J.N. Kapur, New Age International, New Delhi.

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SCHEME OF TEACHING AND EXAMINATIONS 2019-2020
MASTER OF SCIENCE IN INFORMATION TECHNOLOGY

THIRD SEMESTER

Subject Code	SUBJECTS	Teaching Load Per Week			Credit L+((T+P)/2)	Examination Marks							
						Max. Marks				Min. Marks			
		L	T	P		Th	Ses	Pr	Total	Th	Ses	Pr	Total
MSc(IT) 301	Java Programming Language	3	2	-	4	100	25	-	125	40	15	-	55
MSc(IT) 302	Python Programming Language	3	2	-	4	100	25	-	125	40	15	-	55
MSc(IT) 303	Software Engineering	3	2	-	4	100	25	-	125	40	15	-	55
MSc(IT) 304	**Electives :** 1. Advanced Computer Architecture 2. Data Mining & Warehousing 3. Cloud Computing 4. Digital Image Processing	3	2	-	4	100	25	-	125	40	15	-	55
MSc(IT) 305	**Electives :** 1. Mobile Communication 2. Theory of Computations 3. Internet of Things 4. Analysis and Design of Algorithms	3	2	-	4	100	25	-	125	40	15	-	55
MSc(IT) 306	Programming Lab - Based on 301	-	-	3x2	3	-	50	100	150	-	30	50	80
MSc(IT) 307	Programming Practice - Based on 302	-	-	2	1	-	50	50	100	-	30	25	55
MSc(IT) 308	Common Software/Mini-Project	-	-	2	1	-	50	50	100	-	30	25	55
MSc(IT) 309	Managerial Skills / Seminar	-	-	2	1	-	25	-	25	-	15	-	15
	TOTAL	15	10	12	26	500	300	200	**1000**	200	180	100	**480**

27.4.19 29/04/19 27.04.2019 27.04.19 22/4/19

27/4/19

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Pt. Ravishankar Shukla University, Raipur

Scheme of Examination

M.A./M.Sc. (MATHEMATICS) (Semester-III)

2019 - 20 (Examination – Dec. 2019) onwards

There shall be five theory papers. Two compulsory and three optional. Each paper shall have 100 marks. Out of these five papers, the paper which has theory and practical both, the theory part shall have 70 marks and practical part shall have 30 marks. **Overall tally of marks in theory and practical will be 500.**

Paper		Description	Theory	Sessional	Practical	Remark
Compulsory Papers						
I		Integration Theory and Functional Analysis (I)	80	20	--	--
II		Partial Differential Equations & Mechanics (I)	80	20	--	--
Optional Papers						
III	A	Fundamentals of Computer Science (Object Oriented Programming and Data Structure)	70	--	30	For regular students only
	B	Fuzzy Set Theory & Its Applications (I)	80	20	--	--
	C	Mathematical Biology (I)	80	20	--	--
IV	A	Operations Research (I)	80	20	--	--
	B	Wavelets (I)	80	20	--	--
V	A	Programming in C (with ANSI Features) (I)	70	--	30	For regular students only
	B	Graph Theory (I)	80	20	--	--

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Scheme of Examination

M.A./M.Sc. (MATHEMATICS) (Semester-IV)

2019 - 20 (Examination – Dec. 2019) onwards

There shall be six papers. Two compulsory and three optional papers. Each paper shall have 100 marks. The paper which has theory and practical both, the theory part shall have 70 marks and practical part shall have 30 marks. **Overall tally of marks in theory and practical will be 500.**

Paper		Description	Theory	Sessional	Practical	Remark
Compulsory Papers						
I		Functional Analysis (II)	80	20	--	--
II		Partial Differential Equations & Mechanics (II)	80	20	--	--
Optional Papers						
III	A	Operating System and Database Management System	70	--	30	For regular students only
	B	Fuzzy Set Theory & Its Applications (II)	80	20	--	--
	C	Mathematical Biology(II)	80	20	--	--
IV	A	Operations Research (II)	80	20	-	--
	B	Wavelets (II)	80	20	-	--
V	A	Programming in C (with ANSI Features) (II)	70	--	30	For regular students only
	B	Graph Theory (II)	80	20	--	

10/1/19 10-1-19 10.1.19 10-01-19 10/1/19

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एम.ए.पूर्व इतिहास (M.A. Previous History)

प्रथम एवं द्वितीय सेमेस्टर (First & Second Semester)

सत्र 2018–19 (Session 2018-19)

(जुलाई 2018 से प्रारंभ)

टीप :– तीन अनिवार्य प्रश्न पत्रों के अतिरिक्त परीक्षार्थियों को कोई एक वैकल्पिक प्रश्न पत्र का चयन करना होगा। प्रत्येक प्रश्न पत्र 100–100 अंकों का होगा। 100 अंकों में 80 अंक सैद्धांतिक एवं 20 अंक आंतरिक मूल्यांकन के होंगे। सभी प्रश्न पत्रों के 5–5 केडिट हैं।

प्रथम सेमेस्टर (First semester)

प्रश्न पत्र	प्रश्न पत्र का नाम	कोड संख्या	पूर्णांक	सैद्धांतिक	
प्रथम I	इतिहास पद्धति (अनिवार्य) Historiography (Compulsory)	0370–I	100	80	20
द्वितीय II	आधुनिक विश्व 1800–1920 ई. (अनिवार्य) Modern world 1800-1920 A.D.(Compulsory)	0371–I	100	80	20
तृतीय III	प्राचीन एवं मध्यकालीन छत्तीसगढ़ (अनिवार्य) Ancient and Medieval Chhattisgarh (Compulsory)	0372–I	100	80	20
चतुर्थ IV	ग्रेट ब्रिटेन का इतिहास 1815–1885 ई. (वैकल्पिक–अ) History of Great Britain 1815-1885A.D. (Optional-A)	0373–I	100	80	20
चतुर्थ IV	भारतीय इतिहास में नारी– प्राचीन एवं मध्यकालीन (वैकल्पिक–ब) Women in Indian History in Ancient & Medieval Period (Optional-B)	0377–I	100	80	20

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द्वितीय सेमेस्टर (Second semester)

प्रश्न पत्र	प्रश्न पत्र का नाम	कोड संख्या	पूर्णांक	सैद्धांतिक	आंतरिक मूल्यांकन
पंचम V	इतिहास लेखन (अनिवार्य) Historigraphy (Compulsory)	0370–II	100	80	20
षष्ठम VI	समकालीन विश्व 1920–2000 ई. (अनिवार्य) Contemporary world 1920-2000 A.D. (Compulsory)	0371–II	100	80	20
सप्तम VII	आधुनिक छत्तीसगढ़ (अनिवार्य) Modern Chhattisgarh (Compulsory)	0372–II	100	80	20
अष्टम VIII	आधुनिक इंग्लैण्ड 1885–1956 ई. (वैकल्पिक–अ) Modern England 1885-1956A.D. (Optional-A)	0373–II	100	80	20
अष्टम VIII	आधुनिक भारत में नारी (वैकल्पिक–ब) Women in Modern India (Optional-B)	0377–II	100	80	20

टीप –उपरोक्त वैकल्पिक प्रश्न पत्रों अ एवं ब में से कोई एक का चयन करना होगा।

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2019-20 2019-20
सत्र–~~2018–19~~ (Session ~~2018-19~~) 26/3/19
(जुलाई ~~2018~~ से प्रारंभ) 2019
एम.ए.अंतिम, इतिहास (M.A. Final, History)
तृतीय एवं चतुर्थ सेमेस्टर (Third &Fourth Semester)

टीप :– परीक्षार्थियों को निम्नलिखित खण्ड **ब एवं स में से किसी एक खण्ड** का चयन कर उसके दोनों प्रश्न पत्रों को हल करना होगा तथा दिये गए चार वैकल्पिक प्रश्न पत्रों में से **कोई दो वैकल्पिक प्रश्न पत्रों** का चयन करना होगा। सभी प्रश्न पत्रों में 100–100 अंक होंगे। 100 अंकों में 80 अंक सैद्धांतिक एवं 20 अंक आंतरिक मूल्यांकन के होंगे। सभी प्रश्न पत्रों के 5–5 केडिट है।

तृतीय सेमेस्टर (Third Semester)

प्रश्न पत्र	प्रश्न पत्र का नाम	कोड संख्या	पूर्णांक	सैद्धांतिक	आंतरिक मूल्यांकन
	खण्ड ब : मध्यकालीन भारत				
	Setion B : Medieval India	0380–I	100	80	20
प्रथम	सल्तनत कालीन भारतीय राजनय एवं अर्थव्यवस्था (1200 से 1526 ई. तक)				
I	Indian polity and economy in the Sultanate period (1200-1526 A.D.)				
द्वितीय	सल्तनत कालीन समाज एवं संस्कृति (1200 से 1526 ई.)	0381–I	100	80	20
II	Society and culture in the Sultanate period (1200-1526 A.D.)				
	खण्ड स : आधुनिक भारत				
	Setion C : Modern India				
प्रथम	आधुनिक भारत का राजनीतिक, प्रशासनिक इतिहास (1757 ई. से 1857 ई. तक)	0382–I	100	80	20
I	Political and Administrative History of Modern India(1757 A.D. to 1857 A.D.)				

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द्वितीय II	आधुनिक भारत का आर्थिक, सामाजिक, एवं सांस्कृतिक इतिहास (1757 ई. से 1857 ई. तक) Economical,Social and Cultural History of Modern India (1757 -1857 A.D.)	0383–I	100	80	20

वैकल्पिक प्रश्न पत्र (Optional Paper)					
वैक. प्रथम Op. - I	भारतीय राष्ट्रीय आंदोलन का इतिहास (1857 से 1922 ई. तक) History of Indian National Movement (1857 to 1922 A.D.)	0384–I	100	80	20
वैक. द्वितीय Op. - II	भारत का सांस्कृतिक इतिहास (प्रारंभ से 1526 ई. तक) Cultural History of India (Begining to 1526 A.D.)	0385–I	100	80	20
वैक. तृतीय Op. - III	भारतीय संविधान और शासन व्यवस्था (Indian Constitution and Administrative System)	0386–I A	100	80	20
वैक. चतुर्थ Op. - IV	पर्यटन सिद्धांत Tourism Theory	0387–I	100	80	20

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चतुर्थ सेमेस्टर (Forth Semester)

प्रश्न पत्र	प्रश्न पत्र का नाम	कोड संख्या	पूर्णांक	सैद्धांतिक	आंतरिक मूल्यांकन
	खण्ड ब : मध्यकालीन भारत **Setion B : Medieval India**				
प्रथम I	मुगलकालीन भारतीय राजनय एवं अर्थव्यवस्था (1526 से 1750 ई. तक) Indian Politiy and Economy in Mughal Period (1526-1750 A.D.)	0380–II	100	80	20
द्वितीय II	मुगलकालीन समाज एवं संस्कृति (1526 से 1750 ई.) Society and Culture in Mughal Period (1526-1750 A.D.)	0381–II	100	80	20
	खण्ड स : आधुनिक भारत **Setion C : Modern India**				
प्रथम I	आधुनिक भारत का राजनीतिक एवं प्रशासनिक इतिहास (1858 ई. से 1964 तक) (Political and Administrative History of Modern India (1858 - 1964 A.D.)	0382–II	100	80	20
द्वितीय II	आधुनिक भारत का आर्थिक, सामाजिक एवं सांस्कृतिक इतिहास (1858 ई. से 1964 ई. तक) Economical, Social,and Cultural History of Modern India (1858 A.D. to 1964 A.D.)	0383–II	100	80	20

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वैकल्पिक प्रश्न पत्र (Optional Paper)					
वैक. प्रथम Op. - I	भारतीय राष्ट्रीय आंदोलन का इतिहास (1922 से 1947 ई. तक) History of Indian Indian National Movement (1922 - 1947 A.D.)	0384–II	100	80	20
वैक. द्वितीय Op. - II	भारत का सांस्कृतिक इतिहास (1526 ई. से 1950 ई. तक) Cultural History of India (1526 - 1950 A.D.)	0385–II	100	80	20
वैक. तृतीय Op. - III	भारत की केन्द्रीय तथा प्रांतीय शासन व्यवस्था Central and Provincial Administrative System of India	0386–IIA	100	80	20
वैक. चतुर्थ Op. - IV	पर्यटन सिद्धांत एवं व्यवहार–इतिहास के संदर्भ में Tourism Theory and Principles In Reference of History	0387–II	100	80	20

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M.A./M. Sc. GEOGRAPHY
SEMESTER III (2018-19)

M.A./M. Sc. Geography Semester III shall consist the following papers:

S. No.	Paper	Title	M. M.		
			Written	Inte. Asse.	Total
1.	XI	Population Geography	80	20	100
2.	X II	Settlement Geography	80	20	100
3.	XIII (A)	Remote Sensing Techniques	80	20	100
	OR	**OR**			
4.	XIII (B)	Biogeography and Ecosystem	80	20	100
5.	XIV	Research Methodology	80	20	100
	XV	Practical-III : Remote Sensing and Quantitative Techniques	---	---	100

1. The M.A. /M. Sc. Semester III examination in Geography shall consist of 500 marks. There shall be four theory papers each of 100 marks and one practical of 100 marks as follows:

Paper XI	:	Population Geography
Paper XII	:	Settlement Geography
Paper XIII (A)	:	Remote Sensing Techniques
		OR
Paper XIII (B)	:	Biogeography and Ecosystem
Paper XIV	:	Research Methodology
Paper XV	:	Practical – III: Remote Sensing and Quantitative Techniques

2. The theory papers shall be of three hours duration.
3. Candidates will be required to pass separately in theory and practical examinations.
4. (a) In the practical examination the following shall be the allotment of time and marks.

(i) Practical record	:	20%
(ii) Lab work (up to Four hours)	:	70%
(iii) Viva on i. & ii. Above	:	10%

(b) The external and internal examiners shall jointly submit marks.

(c) All the candidates shall present at the time of the practical examination their practical record regularly signed by the teachers concerned.

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भूगोल अध्ययनशाला
पं. रविशंकर शुक्ल विश्वविद्यालय
रायपुर (छ.ग.)

M.A./M. Sc. GEOGRAPHY
SEMESTER IV (2018-19)

M.A./M.Sc. Geography Semester IV shall consist the following papers:

S. No.	Paper	Title	M. M.		
			Written	Int. Ass.	Total
1.	XVI	Urban Geography	80	20	100
2.	X VII	Agricultural Geography	80	20	100
3.	XVIII (A)	Geographical Information System	80	20	100
	OR	OR			
4.	XVIII (B)	Environmental Geography	80	20	100
	XIX	Field Work (Physical and Socio-Economic)	---	---	100
5.	XX	Practical-IV: Geographical Information System and Quantitative Techniques	---	---	100

1. The M.A./M.Sc. Semester IV examination in Geography shall consist of 500 marks.

   There shall be three theory papers and one Field Work report each of 100 marks and one practical of 100 marks as follows.

S. No.	Paper		Title
1.	XVI	:	Urban Geography
2.	XVII	:	Agricultural Geography
.3.	XVIII (A)	:	Geographical Information System
			OR
	XVIII (B)	:	Environmental Geography
4.	XIX	:	Field Work (Physical and Socio-Economic)
5.	XX	:	Practical-IV: Geographical Information system and Quantitative Techniques

2. The theory papers shall be of three hours duration.
3. Candidates will be required to pass separately in theory and practical examinations.
4. Candidates will be required to submit their Field Report in three copies in hard bound at least one hundred pages for Valuation.
5. (a) In the practical examination the following shall be the allotment of time and marks.
   - (i) Practical record 20%
   - (ii) Lab work (up to Four hours) 70%
   - (iii) Viva on i. & ii. above 10%

   (b) The external and internal examiners shall jointly submit marks.

Principal
B.C.S. Govt. P.G. College
Dhamtari (C.G.)

अध्यक्ष
भूगोल अध्ययनशाला
पं. रविशंकर शुक्ल विश्वविद्यालय
रायपुर (छ.ग.)

SCHEME OF EXAMINATION
&
SYLLABUS
of
M.Sc. (PHYSICS)

UNDER

FACULTY OF SCIENCE

Approved by Board of Studies in Physics

EFFECTIVE FROM JULY 2019

School of Studies in Physics & Astrophysics
Pt. Ravishankar Shukla University
Raipur (C.G.) 492010
PH: - 0771-2262864
WEBSITE: -www.prsu.ac.in

Approved by Board of Studies in Physics on 18, January 2019
PT. RAVISHANKAR SHUKLA UNIVERSITY, RAIPUR

Principal
B.C.S. Govt. P.G. College
Dhamtari (C.G.)

18/01/2019 18/01/2019 18/01/19 18/01/19 18/1.19

Semester III

Name of the Paper	Marks					Credits
	Theory		Internal		Total	
	Max	Min	Max	Min		
1. Quantum Mechanics-II	80	16	20	04	100	4
2. Atomic & Molecular Physics	80	16	20	04	100	4
3. Solid State Physics-I	80	16	20	04	100	4
4. (A) Astronomy & Astrophysics-I (B) Electronics (Communication)-I (C) Physics of Nano-material-I (D) Space Physics-I	80	16	20	04	100	4
Laboratory Course III-A Materials Science & General	-		-		100	2
Laboratory Course III-B : Astronomy & Astrophysics **OR** : Electronics (Communication) **OR** : Physics of Nano-material **OR** : Space Physics	-		-		100	2
Total Marks					600	20

Total Marks for Semester III = 600 & Credit = 20

Semester IV

Name of the Paper	Marks					Credits
	Theory		Internal		Total	
	Max	Min	Max	Min		
1. Nuclear & Particle Physics	80	16	20	04	100	4
2. Laser Physics and Applications	80	16	20	04	100	4
3. Solid State Physics -II	80	16	20	04	100	4
4. (A) Astronomy & Astrophysics-II (B) Electronics (Communication)-II (C) Physics of Nano-material-II (D) Space Physics-II	80	16	20	04	100	4
Project Work	-		-		200	4
Total Marks					600	20

Total Marks for Semester IV = 600 & Credit = 20

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18/01/19

18.1.19

SYLLABUS

2018-2019

PT. RAVISHANKAR SHUKLA UNIVERSITY

RAIPUR

CHHATTISGARH

PT. RAVISHANKAR SHUKLA UNIVERSITY, RAIPUR

SYLLABUS FOR 2018-19

M. Sc. ZOOLOGY

Semester	Paper	Title	External marks	Internal marks	Credit
First JULY-DEC, 2017	I	Biosystematics, Taxonomy and Biodiversity	80	20	4
	II	Structure and Function of Invertebrates	80	20	4
	III	Population Genetics and Evolution	80	20	4
	IV	Tools & Techniques in Biology	80	20	4
	LC-I	Lab Course I (Based on paper I & II)	80	20	2
	LC-II	Lab Course II (Based on paper III & IV)	80	20	2
Second JAN-JUNE, 2018	I	Molecular Cell Biology and Biotechnology	80	20	4
	II	General Physiology and Endocrinology	80	20	4
	III	Development Biology	80	20	4
	IV	Quantitative Biology and Computer Application	80	20	4
	LC-I	Lab Course I (Based on paper I & II)	80	20	2
	LC-II	Lab Course II (Based on paper III & IV)	80	20	2
Third JULY-DEC, 2018	I	Comparative Anatomy of	80	20	4

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		Vertebrates			
	II	Animal Behaviour	80	20	4
	III	Environment Physiology and Population Ecology	80	20	4
	IV	Immunology and Parasitism	80	20	4
	LC-I	Lab Course I (Based on paper I & II)	80	20	2
	LC-II	Lab Course II (Based on paper III & IV)	80	20	2
	Compulsory				
Fourth JAN-JUNE, 2019	I	Biochemistry	80	20	4
	II	Neurophysiology	80	20	4
	Optional papers (Group I)*				
	I	Fish (ichthyology) structure and function	80	20	4
	II	Cell biology	80	20	4
	III	Entomology	80	20	4
	IV	Wild life conservation	80	20	4
	V	Biology of Vertebrates immune system	80	20	4
	Optional paper (Group II)*				
	I	Pisciculture and economic importance of fishes (Ichthyology)	80	20	4
	II	Cellular organization and molecular organization	80	20	4
	III	Applied entomology	80	20	4
	IV	Environment and Biodiversity conservation	80	20	4
	V	Molecular endocrinology and reproductive technology	80	20	4
	LC-I	Lab Course I (Based on paper I & II)	80	20	2
	LC-II	Lab Course I (Based on paper III & IV)	80	20	2
Total			1920	480	80

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